Development of advanced nursing practice in China: A SWOT analysis

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Core Group Member, NP/APN Network

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Nursing education in China: past, present and future

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<table>
<thead>
<tr>
<th>Ruler/key historical events</th>
<th>Time line</th>
<th>Nursing-related events</th>
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<tr>
<td>Imperial Era until 1912</td>
<td>The past</td>
<td>Setting up of missionary hospitals and training of some</td>
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<td>Last emperor – Xuantong</td>
<td>(1820–1951)</td>
<td>personnel to provide basic care</td>
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<tr>
<td>1912–1949</td>
<td>1887</td>
<td>Setting up of a formal nurse training programme set up in</td>
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<td>1912 Foundation of Sun Yat Sen’s Kuomintang</td>
<td></td>
<td>Guangdong</td>
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<td>1921 Foundation of the Chinese Communist Party</td>
<td></td>
<td>1920 Commencement of first baccalaureate nursing programme at</td>
</tr>
<tr>
<td>Invasion of China by many countries; Civil wars</td>
<td></td>
<td>Peking Union Medical College</td>
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<tr>
<td>1949 Founding of the People’s Republic of China</td>
<td></td>
<td>programmes to 2 years</td>
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<tr>
<td>1958 Great Leap Forward</td>
<td>1958</td>
<td>Nursing programmes were extended to 3 years</td>
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<tr>
<td>1976–1977 Head of State – Hua Guofeng</td>
<td>1979</td>
<td>All nursing programmes suspended</td>
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<tr>
<td>1978–1991 Head of State – Deng Xiaoping</td>
<td></td>
<td>Nanjing Medical University established the associate nursing</td>
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<tr>
<td>1978 Chinese economic reforms</td>
<td>1983</td>
<td>programme</td>
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<td>1980 Special economic zones</td>
<td></td>
<td>Tianjin Medical University resumed baccalaureate nursing</td>
</tr>
<tr>
<td>Ideology: ‘Three Represents’, representing development trends, orientations of advanced culture and interests of the majority of people of China</td>
<td>1993</td>
<td>National Nurse Qualification Examination only for graduates from nursing schools at the health school and university diploma levels</td>
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<tr>
<td>2004 – present</td>
<td>2004</td>
<td>The Second Military Medical University and Central South</td>
</tr>
<tr>
<td>Head of State – Hu Jintao</td>
<td></td>
<td>University opened the first doctoral nursing programmes</td>
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<tr>
<td>Ideology: Scientific concept development</td>
<td>2007</td>
<td>Setting up of Instructional Committee for Nursing Education of</td>
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<td></td>
<td></td>
<td>Ministry of Education and piloting the accreditation</td>
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<tr>
<td>2008</td>
<td>2008</td>
<td>Graduates from all levels of nursing schools must pass the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>National Nurse Qualification Examination before they can qualify for nursing practise</td>
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<tr>
<td>2008</td>
<td></td>
<td>New Nurse Act</td>
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</tbody>
</table>

TCM, Traditional Chinese Medicine.
The past (1820 - 1951)

<table>
<thead>
<tr>
<th>Time line</th>
<th>Nursing-related events</th>
</tr>
</thead>
<tbody>
<tr>
<td>The past (1820-1951)</td>
<td>Setting up of missionary hospitals and training of some personnel to provide basic care</td>
</tr>
<tr>
<td>1837</td>
<td>Introduction of a short nurse training programme in Guangdong</td>
</tr>
<tr>
<td>1887</td>
<td>Setting up of a formal nurse training programme set up in West Gate Hospital</td>
</tr>
</tbody>
</table>
The last emperor
Imperial era ended 1912

1912 Foundation of Sun Yat Sen's Kuomintang
1920 Commencement of first baccalaureate nursing programme at
1921 Foundation of the Chinese Communist Party
Peking Union Medical College
Invasion of China by many countries; Civil wars
1933 Chinese governments started their own nursing schools

Teaching materials –
direct translation from English
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1949–1975</td>
<td>Head of State – Mao Zedong</td>
<td></td>
</tr>
<tr>
<td>1949</td>
<td>Founding of the People’s Republic of China</td>
<td></td>
</tr>
<tr>
<td>1951</td>
<td></td>
<td>The Ministry of Health unified all nursing education programmes to 2 years</td>
</tr>
<tr>
<td>1954</td>
<td></td>
<td>Nursing programmes were extended to 3 years</td>
</tr>
<tr>
<td>1958</td>
<td></td>
<td>Introduction of TCM nursing schools</td>
</tr>
<tr>
<td>1966–1976</td>
<td>Cultural Revolution</td>
<td>All nursing programmes suspended</td>
</tr>
</tbody>
</table>
Chinese Vice Premier Li Keqiang poses for a group photo with nursing representatives in Beijing, China, Aug. 19, 2009.

1979
Nanjing Medical University established the associate nursing programme

1983
Tianjin Medical University resumed baccalaureate nursing education

1992
Beijing Medical University started a Master in Nursing programme

1993
National Nurse Qualification Examination only for graduates from nursing schools at the health school and university diploma levels

2004
The Second Military Medical University and Central South University opened the first doctoral nursing programmes

2007
Setting up of Instructional Committee for Nursing Education of Ministry of Education and piloting the accreditation

2008
Graduates from all levels of nursing schools must pass the National Nurse Qualification Examination before they can qualify for nursing practice

2008
New Nurse Act
Strengths

Healthcare reform with five specific aims:
(1) To enhance the development of a comprehensive basic health insurance system,
(2) To initiate the establishment of a national drug system,
(3) to improve the primary medical system,
(4) To enhance equality in the public health system, and
(5) To pilot public hospital reform.

Affordable, Accessible, Available and Quality health care for people in China.
Strengths

Evaluation of hospital performance

- Client-centred & holistic nursing care
  - Nursing manpower requirement
Nurse Act

• Total number of nurses NOT < 50% of the total health workforce in the hospital
• The nurse-to-bed ratio should be at least 0.4 to 1
• The definition of nurse in China is also protected by the updated Nurse Act (Liu & Zeng 2008a, 2008b)
Rights of the nurses in Nurse Act

• The right to equal work and equal pay,
• The right to continued education and promotion competition
• The right to challenge medical prescriptions when in doubt

(Liu & Zeng 2008a, 2008b)
Weaknesses

China

health spending 5% of GDP
government 39.4%

Other developing or developed countries

health spending 8.5% of GDP,
government 61.8%
Weaknesses

Health expenditure – **US$49 per capita per year** (ranked 141 out of 191 countries in 2001)

People in **rural areas**
  – 2/3 of the total **population**
Health care **expenditure**
  – consume **1/4**

(Zhang 2009)
Weaknesses

Inadequate number of nurses and doctors
## Nurse and physician ratio of different countries

<table>
<thead>
<tr>
<th>Continent</th>
<th>Country / City</th>
<th>Nurse / 1000 population</th>
<th>Physician / 1000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>America (Latin)</td>
<td>El Salvador</td>
<td>1.54</td>
<td>0.80</td>
</tr>
<tr>
<td></td>
<td>Panama</td>
<td>1.50</td>
<td>1.24</td>
</tr>
<tr>
<td></td>
<td>Puerto Rico</td>
<td>1.98</td>
<td>1.68</td>
</tr>
<tr>
<td>America (North)</td>
<td>Canada</td>
<td>9.95</td>
<td>2.14</td>
</tr>
<tr>
<td></td>
<td>United States</td>
<td>9.37</td>
<td>2.56</td>
</tr>
<tr>
<td>Africa</td>
<td>Botswana</td>
<td>2.65</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>South Africa</td>
<td>4.08</td>
<td>0.77</td>
</tr>
<tr>
<td>Asia</td>
<td>Hong Kong&lt;sup&gt;a&lt;/sup&gt;</td>
<td>5.28</td>
<td>1.70</td>
</tr>
<tr>
<td></td>
<td>Taiwan&lt;sup&gt;b&lt;/sup&gt;</td>
<td>4.49</td>
<td>1.47</td>
</tr>
<tr>
<td></td>
<td>Mainland China</td>
<td>1.05</td>
<td>1.06</td>
</tr>
<tr>
<td></td>
<td>Japan</td>
<td>7.79</td>
<td>1.98</td>
</tr>
<tr>
<td></td>
<td>Korea</td>
<td>3.85</td>
<td>2.29</td>
</tr>
<tr>
<td></td>
<td>Singapore</td>
<td>4.24</td>
<td>1.40</td>
</tr>
<tr>
<td></td>
<td>Thailand</td>
<td>2.82</td>
<td>0.37</td>
</tr>
<tr>
<td>Australia</td>
<td>Australia</td>
<td>9.17</td>
<td>2.41</td>
</tr>
<tr>
<td></td>
<td>New Zealand</td>
<td>8.16</td>
<td>2.37</td>
</tr>
<tr>
<td>Europe</td>
<td>Belgium</td>
<td>5.83</td>
<td>4.49</td>
</tr>
<tr>
<td></td>
<td>Germany</td>
<td>9.72</td>
<td>3.37</td>
</tr>
<tr>
<td></td>
<td>Netherlands</td>
<td>13.73</td>
<td>3.15</td>
</tr>
<tr>
<td></td>
<td>Switzerland</td>
<td>10.75</td>
<td>3.61</td>
</tr>
<tr>
<td></td>
<td>United Kingdom</td>
<td>12.12</td>
<td>2.30</td>
</tr>
</tbody>
</table>

<sup>a</sup> Calculated from the Hong Kong report (2006);  
<sup>b</sup> Health care financing policies of Canada, the United Kingdom and Taiwan (2006), Retrieved March 22, 2008, accessed at  
Weaknesses

Inadequate number of nurses

Nurse to doctor ratio in China –

  doctor - 1.25 to 1.57 per 1000 population
  nurse – 1.6 per 1000 population

Nurses’ focus are on the completion of medical tasks

Globally - 4-5 nurses to 1 doctor (WHO 1996)
There are **2.18 million** of nurses in China

- **38.8%** had a university diploma
- **8.9%** had an undergraduate or graduate qualifications
- **52.3%** had qualifications at vocational diploma/certificate level

Proposed:

**3.14 per 1000 population** by year 2020
Opportunities

Healthcare reform – shifting focus on

• *primary are* and *chronic disease management*
• *client-centered care*
• integration of *education, research and practice*

Graduate education - Clinical masters
Opportunities

58 Master in Nursing programs as of 2007 (Li & Shang 2009)
10 PhD nursing programs as of 2008 (Ma & Liu 2009)

Students enrolled in the postgraduate programs must pass the National Entrance Examination for postgraduate studies.

Postgraduate streams:
- nursing management
- nursing education
- clinical specialty nursing
- medical-surgical nursing
- community nursing
- psychological nursing (Liu et al. 2009)
In 2011, the discipline of Nursing was granted the status of
First-class subject (Academic Degrees Committee of the State Council 2011)

Nursing previously came under Clinical Medicine as a second-class subject.
Extract from a reflective journal written by A diabetes APN student

Our unit has admitted a type 1 diabetes client this month. He is eighteen years old, receiving insulin treatment 4 times a day. He was admitted to the hospital because of poor control of blood glucose. His fasting blood glucose level was 11.2mmol/L. Before admission, his insulin dosage was 8 units before breakfast, 6 units before lunch and dinner, and 4 units at bedtime. When he was admitted to the hospital, his bedtime insulin was increased to 6 units. However, his fasting blood glucose level was still on the high side in the morning.

The literature and the American Diabetes Association guidelines suggested that there might be three possible reasons for this phenomenon.

1. Insulin dosage before bedtime was insufficient.
2. Somogyi effect [rebound hyperglycaemia in the morning caused by night time hypoglycaemia]
3. Dawn phenomenon [natural overnight release of hormones, such as growth hormones, which increase insulin resistance]
Since the client was an adolescent and still in the stage of growth and development, the Dawn phenomenon was quite likely the reason for the increased blood glucose level before breakfast.

I therefore suggested monitoring the blood glucose level more frequently throughout the night. The readings obtained were:

1am  4.9mmol/L
2am  5.6mmol/L
3am  6.3mmol/L
5am  7.5mmol/L
7am  10.6mmol/L

This confirmed my clinical speculation.

The breakfast time and morning insulin dose for this adolescent client was then brought forward to 6:00am to help regulate his blood glucose level.
An account from
A geriatric APN student

The greatest impact of this programme is [the change of] my practice in discharging patients.

I now incorporate the concept of assessing post-discharge patient needs in care. For the elderly person who has mobility problems, I will now check to see if the toilets are the squatting or the sitting type. The home discharge plan is more comprehensive now and I’ll look up the literature [for specific disease management] to make my plan more complete.
APN book for Postgraduate students
Threats

Medical dominant
Management dominant
Costing of nursing work

Nurse **US$7.3** per hour
Vs
Doctor **US$39.8** per hour

(Liu et al. 2009)

Hospital cost recovered charges for nursing care
**18%-36%** to **4%-10%**

(Ma et al. 2009)
Threat - Choice of nursing as a career

• The number of nursing students increasing … but the retention is a challenge

• 30.1% chose nursing as a major to be admitted into their preferred universities … 29.0% chose nursing based on their public examination results (Zhang & Petrini 2008).
Recognition & Accreditation of APNs

• Are our APNs fit for practice?
• How do we know?
• How do we let others know?
Factors contributing to the development of ANP

- Differentiation of nursing work
- Cost containment
- Nexus of work and profession
- Specialization of patient groups
- Enhancement of nursing education
- International trend
Factors **impeding** the development of ANP

- **Medical care** (v.s. health maintenance) is a **revenue generating business**
- **Lack of understanding** / appreciation of ANP from management
- Health care environment, including both the providers and receivers, that lacks an appreciation of **team work**
Think global

Act local
APN Clinical Leadership:
The road less travelled
The Road Not Taken
by Robert Frost (1916)

Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth

And both that morning equally lay
In leaves no step had trodden black.
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I doubted if I should ever come back.

Then took the other, as just as fair,
And having perhaps the better claim
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,

I shall be telling this with a sigh
Somewhere ages and ages hence
Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference.
Dare to be different
Courage to dream
Enjoy products of the efforts!